

**(C) WPI / DERWENT****AN - 1998-470648 [41]****AP - JP19970000923 19970107****CPY - MITQ****DC - Q75 X27****FS - GMPI;EPI****IC - F25B1/00 ; F25B1/02****MC - X27-E01B X27-F****PA - (MITQ ) MITSUBISHI ELECTRIC CORP****PN - JP10197082 A 19980731 DW199841 F25B1/02 006pp****PR - JP19970000923 19970107****XIC - F25B-001/00 ; F25B-001/02****XP - N1998-366968**

**AB - J10197082** The equipment consists of a compressor which compresses a HFC system refrigerant of low pressure into a high pressure. A condenser is provided to cool the high pressure refrigerant discharged from the compressor and condense it into a liquid from the gaseous state. An expansion mechanism is provided to expand the liquid refrigerant condensed by the condenser to a low pressure. An evaporator is provided to evaporate the low pressure liquid refrigerant sent from the expansion mechanism.

- A closed refrigerating cycle is constituted with the compressor, the condenser, the expansion mechanism and the evaporator to generate a cooling by recirculation of the refrigerant in liquid and gaseous states. The compressor is constituted with a pair of diaphragm springs (71a,71b) which support a linear motor, a displacement piston (46) and a cylinder (43) into which the piston reciprocates. The compressor is a linear compressor which does not use any refrigeration oil for lubrication.

- **ADVANTAGE** - Eliminates lubrication problem of compressor even when not using refrigeration oil. Prevents reliability of operation from being damaged by compressor. Obtains higher working pressure without difficulty as compared with refrigerator. Eliminates degradation of refrigeration oil and related troubles. Eliminates fear of dirt and slag deposit in expansion mechanism due to degradation of oil. Prevents defective cooling.

- (Dwg.1/4)

**IW - AIR CONDITION EQUIPMENT SYSTEM REFRIGERATE APPLY LINEAR COMPRESSOR  
OPERATE DIAPHRAGM SPRING SUPPORT LINEAR MOTOR DISPLACEMENT PISTON  
CYLINDER REFRIGERATE OIL**

**IKW - AIR CONDITION EQUIPMENT SYSTEM REFRIGERATE APPLY LINEAR COMPRESSOR  
OPERATE DIAPHRAGM SPRING SUPPORT LINEAR MOTOR DISPLACEMENT PISTON  
CYLINDER REFRIGERATE OIL**

**NC - 001****OPD - 1997-01-07****ORD - 1998-07-31****PAW - (MITQ ) MITSUBISHI ELECTRIC CORP**

**TI - Air conditioning equipment for HFC system refrigerant application -  
uses linear compressor operated with diaphragm springs supporting  
linear motor, displacement piston and cylinder without using  
refrigeration oil**